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ABSTRACT

This paper was developed to present to the Technical and Further Educatoin (TAFE) Department in New South Wales alternative approaches to curriculum development to assist the department in choosing an appropriate approach that will meet the current and future needs for an efficient, effective, and streamlined curriculum development process. The paper was used as a resource document for a 2-day workshop. It: (1) describes briefly the methods used in the curriculum study and identifies the sources of information; (2) places the curriculum development approaches proposed in context by providing an overview of these processes in general and those used currently in New South Wales in particular (five practices are discussed--import, in-house, project, contract, and multimodel); (3) provides a suggested framework for good curriculum practice in order to consider any potential approaches; and (4) proposes potential approaches (especially the contract model) to curriculum development and raises a series of related issues for consideration at the workshop. The paper was to be used along with the workshop as a beginning to provide a basis for reforming the curriculum development processes used by TAFE in New South Wales to meet its emerging needs. The document includes 44 references. Appendices include the project proposal, a list of persons interviewed, and the interview questionnaire. (KC)

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TAFE NATIONAL CENTRE FOR RESEARCH AND DEVELOPMENT

APPROACHES TO CURRICULUM DEVELOPMENT:

A discussion paper

Prepared by

John Bone and Hugh Guthrie

for the NSW Department of Technical and Further Education

ADELAIDE 1990

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This discussion paper was originally commissioned by the New South Wales Department of Technical and Further Education. It subsequently has been edited and published in this form to make it available to a wider audience within and outside TAFE. It was developed as a resource for a 2-day workshop and that character has been retained in this version.

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Times of change are always challenging and it augers well for the future of TAFE in New South Wales that despite understandable differences of opinion among staff, the researchers found a strong sense of commitment and belief in the important role that TAFE has to play in the education of the New South Wales community and workforce.

John Bone
Hugh Guthrie

1. INTRODUCTION

1.1 Changes affecting TAFE

Australian industry is in the throes of 'restructuring' in an attempt to meet the challenges posed by the economic facts of life of the 1990s.

This restructuring will result in substantial changes to the structure of work across industries, and will be manifested by changes to industrial awards and agreements. This will, in turn, allow new approaches to work organisation to be implemented across industries and, in particular, within individual organisations and enterprises. The reasons behind these changes have been discussed in a number of recent articles and publications (for example, Hall & Hayton 1989, Cross 1989, Carmichael 1989). The video produced by NSW TAFE, *Life after Debt* (NSW Department of TAFE 1990) and the accompanying resource package are particularly effective in describing the background to, and reasons for, industry and award restructuring.

Industry restructuring will require that individuals know more, be more highly skilled and be more adaptable in order to meet the demands imposed both by the introduction of new technology and new work practices. This restructuring therefore requires a dramatic increase in the level of training for the nation's workforce at all levels.

TAFE obviously has an important role to play in this process. Phil Cross (currently President of the TAFE Teachers' Association) encapsulates the issues clearly. He says:

> The restructuring of industrial awards over the next three years will have a major impact on TAFE and vocational education, an impact no less dramatic than the Kangan Report. Award restructuring is not necessarily built around the expansion of TAFE services to industry and community. Unless TAFE's bureaucracies, teachers and teacher unions handle the consequent demands and role change effectively and efficiently, TAFE could be the loser in the restructure of industry training.
>
> (Cross in Scott 1989, p.8)

The Commonwealth Government, too, has sought over the last several years to highlight significant training issues and initiate debate over TAFE's role in the substantial changes to the Australian economy which are currently occurring. To this end The Hon. John Dawkins and his ministerial colleagues have produced a series of papers which consider the need for reform of training arrangements as necessary components of this structural adjustment to the economy. The reports include *Review of TAFE Funding* (1986), *Skills for Australia* (1987), *Higher Education: A policy discussion paper* (1988), *A Changing Workforce* (1988), *Industry Training in Australia: The need for change* (1988), *Labour Market Reform: The industrial relations agenda* (1988), *Improving Australia's Training System* (1989) and *Award Restructuring: The task ahead* (1989).

Moreover, these reports have also emphasized the need for diversification of training and an increased commitment to training by industry and other key sectors of the economy.

This amount of change places a heavy responsibility on TAFE. Not only is there the prospect of unprecedented demand for TAFE courses but there will also be a demand for TAFE to show leadership, imagination and above all, competence in the delivery of a service to industry that could mean the difference between success or failure in the restructuring exercise. A major component of the task ahead for TAFE is in the area of curriculum development. There is no denying that TAFE has done an admirable job of post-secondary training in the past. However, the requirements of the 1990s mean a quantum leap in terms of TAFE's attention to curriculum content, program design, award flexibility, modes of delivery and demonstrated student competence. **Curriculum development and its associated processes will be the foundation on which this service will be built.** This discussion paper examines ways in which TAFE in New South Wales might best meet the challenges posed in the area of curriculum development by the changes occurring around and within it.

1.2 The Scott report

In late 1989 the findings of a major management review of the New South Wales Education Portfolio were released. The Scott Report (as it has come to be known) investigated the organisation of TAFE in New South Wales in order to build a dynamic vocational education and training enterprise for the 1990s. TAFE in New South Wales was seen to be sinking under the weight of its own structure. In his report Scott (1989) referred to the interim report of the Employment and Skills Formation Council of the National Board of Employment, Education and Training (NBEET) which pointed out:

> Reform of TAFE must continue to have the highest priority. The TAFE system must undergo its own restructuring process if it is to assist in the restructuring of other industries.
>
> (ESFC in Scott 1989,p.4)

Scott found:

- TAFE's management structures and operational procedures needed fundamental adjustment;
- the content of TAFE courses and the way they are delivered needed to be completely reorganised;
- TAFE needed to invest urgently in upgrading the skills of its personnel - managers, teachers and support staff;
- TAFE needed to become far more market-driven and expand its income-generating activities; and
- TAFE's ability to respond to these challenges would remain severely limited while it was constituted as a government department.

The review recommended (amongst other things) that:

- TAFE become a statutory authority - the TAFE Commission (TAFECOM);
- the 25 teaching schools be scrapped and replaced by 10 Industry Training Divisions (ITDs) based on standard ASCI classifications which would be responsible for planning, co-ordinating and controlling the production of curricula in line with State and National needs, as well as local requirements;
- the ITDs are to be located in special centres close to, but not in colleges with the essential expertise to service the needs of industry;
- TAFECOM's operations be reorganised into 24 college networks covering the State, with each under the control of a network manager;
- the central executive be reduced, management of operations be decentralised and structures simplified; and
- that TAFE cease to be the accrediting authority for vocational education and training. Instead, he recommended that an independent body be set up under separate legislation.

The report suggested that new curriculum development procedures should be in place by August 1991.

TAFECOM has already developed a series of corporate goals and objectives for 1990-92 as part of an ambitious and fundamental restructuring of its operations (TAFECOM 1990). It aims to be:

> ... a dynamic leader in the economic and social development of New South Wales through the provision of high quality vocational, preparatory and community education programs and services that enhance the productivity and develop the potential of its people, and up-grade the skills of its workforce.
>
> (TAFECOM 1990, p.10)

The goals and objectives document also outlines the corporate objectives and attendant strategies that are proposed to meet those objectives. The streamlining of accreditation procedures is proposed. A key area of strategy is that of curriculum development.

In addition NSW TAFE will aim to:

- audit the overall provision of programs to determine the appropriateness of mix and range;
- plan courses on the basis of National and State requirements and on the basis of industry and vocational education priorities identified for each community throughout the State;

- design new courses and revise existing courses so that they are relevant to identified vocational competencies and lead to an accredited course award;
- monitor outcomes of all courses and correct identified problems;
- establish procedures to prevent course duplication;
- implement the articulation requirements arising from industry restructuring agreements;
- increase course provision that leads to the award of joint credentials for post-year 10 secondary students;
- increase the use of modular course structures as appropriate;
- develop programs which employ self-pacing and competency-based learning, testing and progression strategies;
- establish appropriate outcome measures for all courses; and
- remove redundant content from courses.

It is clear that good curriculum development procedures are crucial to the achievement of most of the stated goals.

1.3 This discussion paper

This present paper has arisen from a request by the Group General Manager, Education Planning and Quality Assurance of NSW TAFE to the Executive Director of the TAFE National Centre for Research and Development to:

> present to the NSW TAFE Department a report detailing alternative approaches to curriculum development to assist the Department to chose an appropriate approach that will meet the current and future needs for an efficient, effective and streamlined curriculum development process.

The project brief is appended (Appendix 1).

This present paper was a major resource document for a 2-day workshop held in Sydney on 28 and 29 May 1989 for the chiefs of the various ITDs, together with selected other staff of NSW TAFE. It aims to:

- describe (briefly) the methods used in the study and identify the sources of information;
- place the curriculum development approaches proposed in this paper in context by providing an overview of these processes in general and those used currently in New South Wales in particular;

- provide a suggested framework for good curriculum practice in order to consider any potential approaches; and

- propose potential approaches to curriculum development and raise a series of related issues for consideration at the workshop.

It is not seen as a definitive document. Rather it is supposed to be a stimulus for discussion and further action within TAFE in New South Wales. It is not an end in itself but, together with the workshop, represents a beginning which will, over the following months, provide a basis for reforming the curriculum development processes used by TAFE in New South Wales to meet its emerging needs and thus fulfil its role better.

2. METHODOLOGY

In this section the methodology used to gather the information and develop this paper will be briefly described. The two researchers (Hugh Guthrie and John Bone):

- reviewed literature on curriculum development processes obtained from the Centre's Library and Clearinghouse (this included literature from overseas) together with documents provided by staff within NSW TAFE itself;

- held a series of interviews and discussions with personnel from NSW TAFE and other TAFE agencies. One of the researchers visited Sydney for 2 days (10 and 11 April 1990) where he held a series of interviews and discussions with staff in NSW TAFE. Subsequently NSW personnel who were not available on those two days were contacted by telephone. In addition, individuals from other TAFE agencies were also contacted. The list of those contacted, together with the interview schedule used, are appended (see Appendices 2 and 3 respectively);

- discussed the project at one of the Centre's regular meetings of its research and development staff;

- discussed the outline of the paper in the context of the organisation of the 2-day workshop with a member of the Staff Development Division of NSW TAFE;

- had the draft paper reviewed by individuals within both NSW TAFE and the Centre. Changes suggested were incorporated in the revised paper; and

- produced a final paper which was then circulated, together with other workshop papers, to staff in NSW TAFE who will attend the two-day workshop. At the workshop they will consider the paper and its implications for any new curriculum development procedures to be proposed for TAFE in New South Wales.

The methodology is summarised in the flow chart presented in Figure 2.1.

The methodology itself was conducted with a limited budget and over a very short period. The initial proposal was developed early in March. The draft paper was compiled in May 1990. It was revised by 18 May and a master copy sent to NSW for distribution to those attending the workshop.

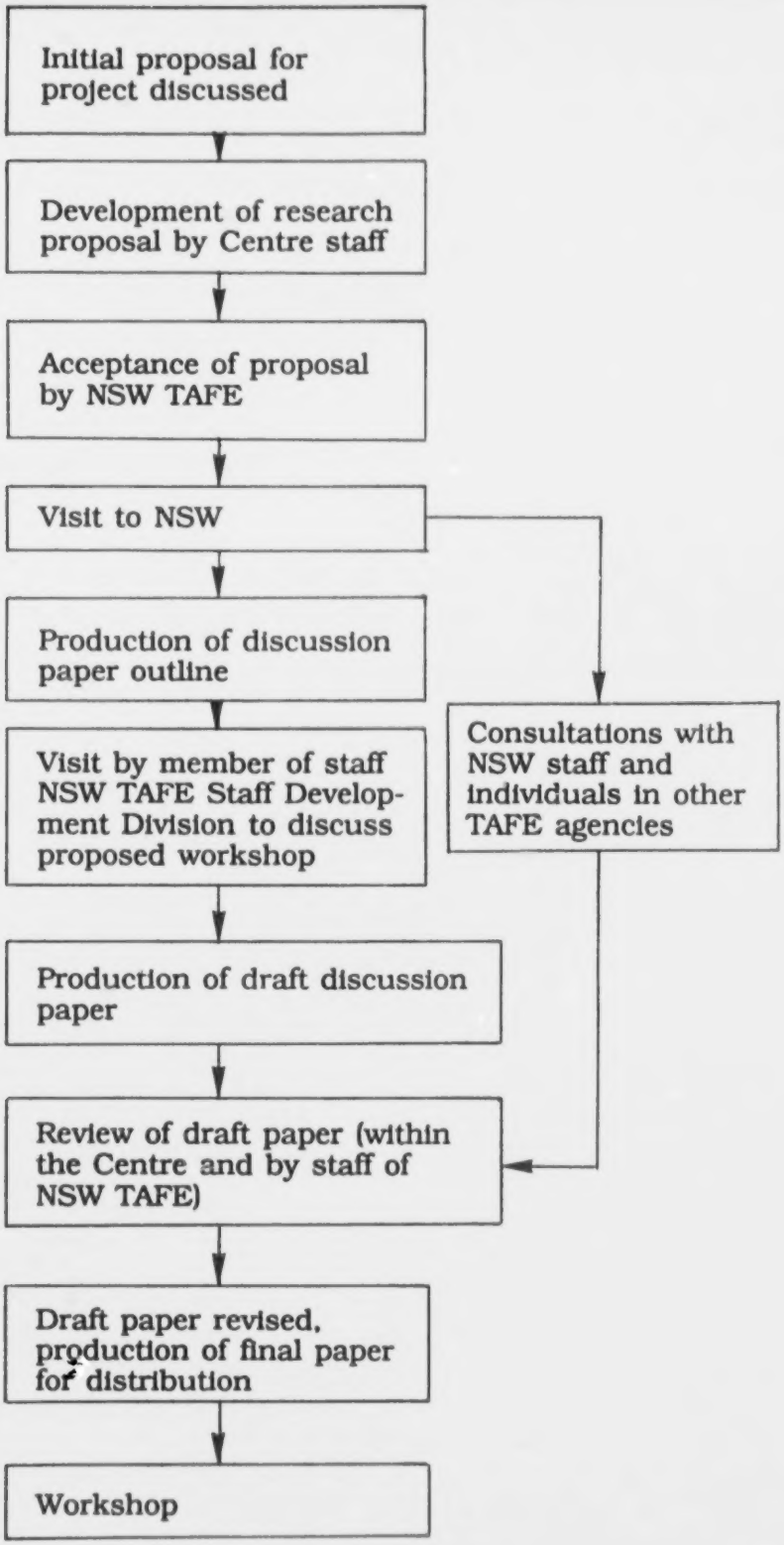

Initial proposal for project discussed
Development of research proposal by Centre staff
Acceptance of proposal by NSW TAFE
Visit to NSW
Production of discussion paper outline
Visit by member of staff NSW TAFE Staff Development Division to discuss proposed workshop
Consultations with NSW staff and individuals in other TAFE agencies
Production of draft discussion paper
Review of draft paper (within the Centre and by staff of NSW TAFE)
Draft paper revised, production of final paper for distribution
Workshop

FIGURE 2.1 FLOW CHART FOR PROJECT METHOD

3. CONTEXT

3.1 Introduction

This section will examine:

- the curriculum development process in general;
- the procedures currently in use in New South Wales;
- perceived shortcomings of these procedures (as well as strengths); and
- other challenges facing curriculum development at present.

This section will be used to 'set the scene' for the subsequent sections of the paper which will attempt to establish a framework of desirable features which any approach being contemplated needs to consider.

3.2 The curriculum development process

It is not the purpose of this relatively brief paper to provide an exhaustive review of curriculum development literature. This section aims to provide a concise statement of the 'timeless' elements of curriculum development that are established by the literature, and to indicate some of the most recent developments and ideas in the field that could prove useful in the task of establishing TAFECOM's curriculum development procedures.

3.2.1 A definition of curriculum

There have been many attempts to define curriculum. One definition is:

> An organised program of studies and learning experiences, the successful completion of which is considered necessary to achieve specified educational goals corresponding to different levels of knowledge and qualifications.
>
> (UNESCO undated, p.4)

This definition emphasises the 'educational outcomes' aspects of curriculum and the assumed goal of 'qualification'. This 'academic' viewpoint has been a favoured one for most educational systems and institutions, including TAFE. However, for the purposes of this paper a definition that focuses on the procedure for developing curriculum rather than the outcomes of curriculum implementation could prove more valuable. For example:

> A curriculum is an attempt to communicate the essential principles and features of an educational program in such a form that it is

understandable, open to critical scrutiny and capable of effective translation into practice.

(In Kuhl & McCarthy 1982, p.81).

Both definitions contain the elements of:

- communication;
- essential principles and features of a program;
- statements about desired outcomes;
- scrutiny; and
- effective implementation.

All of these features need to be considered in choosing a successful curriculum development approach.

3.2.2 Classical approaches to curriculum development

In any curriculum development approach there are 5 basic steps or phases. These are:

- analysis of need;
- design;
- development;
- implementation; and
- review.

However, it is the way that these elements are connected; the relative emphases given to each, the key players in each, the methods adopted to achieve each and the mechanisms used to connect and provide feedback between them, that create different approaches to the curriculum development process that may, or may not, be appropriate for a given system at a given time.

Curriculum development models tend to represent curriculum development steps either as a linear list of processes or circular flow of activities that suggest a continuous feedback mechanism. Figure 3.1 (UNESCO 1982) is typical of the linear model but with some feedback indicated. At a slightly higher level of abstraction, Figure 3.2 illustrates the micro-level curriculum development activities of course design, validation and implementation, in relation to the macro-level activities of needs analyses, philosophy, goals, and evaluation criteria and instrumentation. Thus the basic steps need to be based upon the underlying principles to give meaning to the elements of the process.

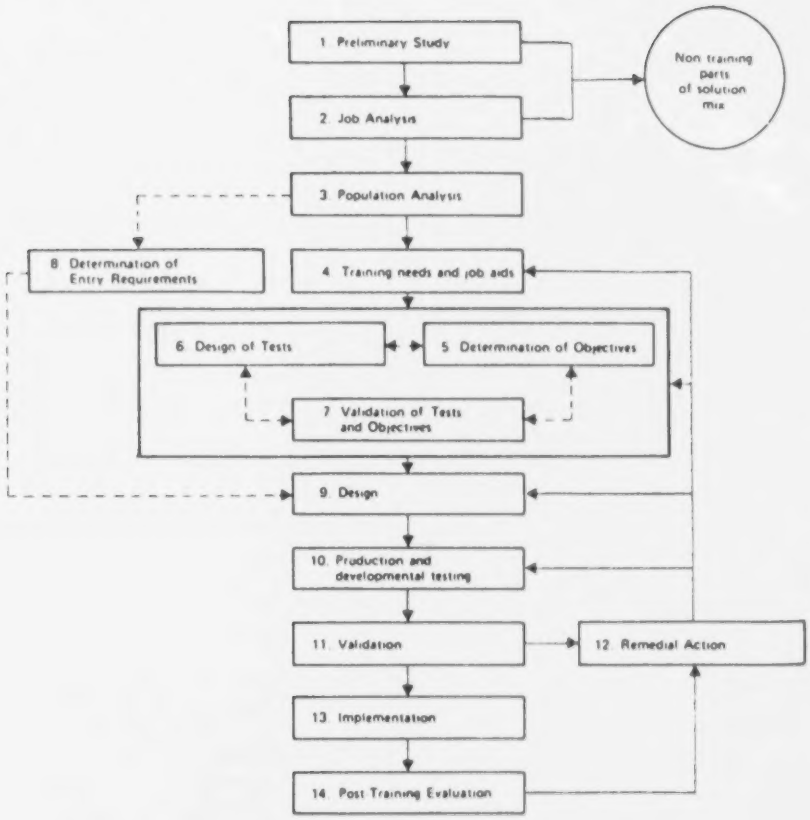


FIGURE 3.1 THE PROCESS OF TRAINING DEVELOPMENT (UNESCO 1982)

A useful representation of these basic elements is given in Figure 3.3 (FEU 1987, p.57). This diagram shows not only the curriculum development process in terms of basic steps but also, in the outer circle, the features, activities and participants in each of the stages.

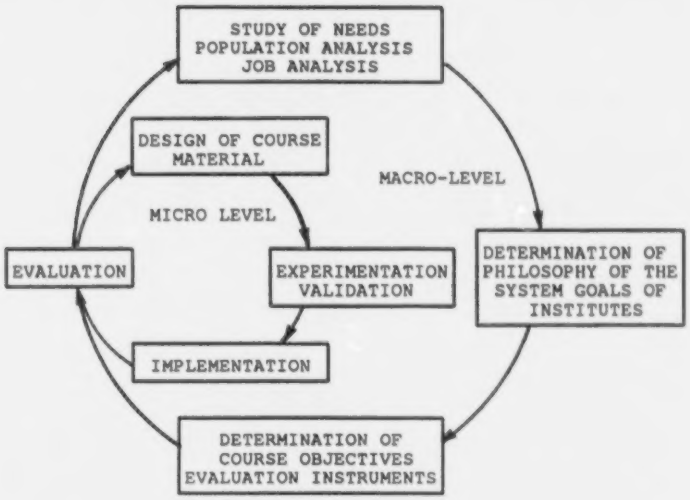
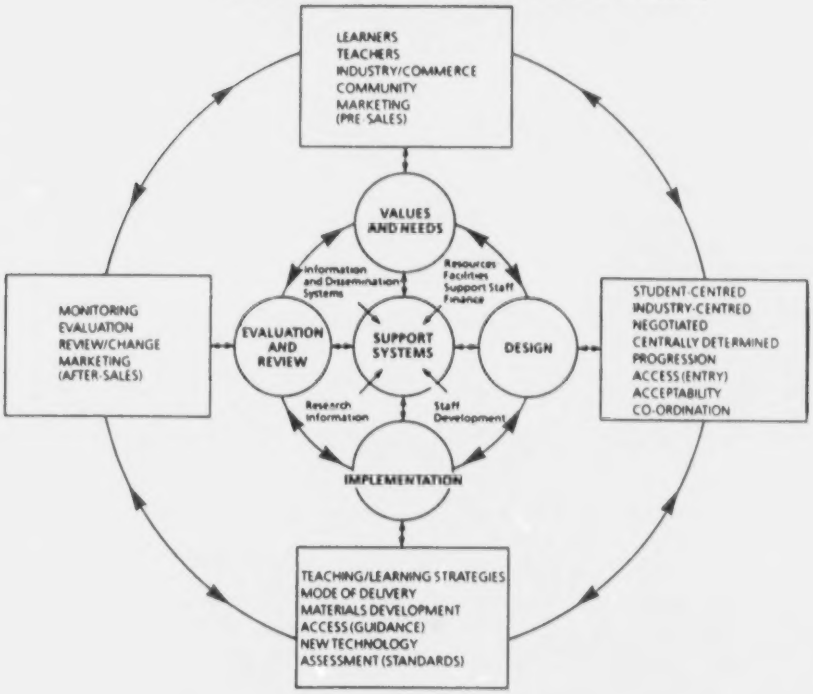


FIGURE 3.2 CURRICULUM ACTIVITIES AT THE MACRO AND MICRO LEVELS (UNESCO 1982)



INNER CIRCLE AND HUB –	OUTER CIRCLE –
The curriculum development cycle	Features of each stage in the cycle

FIGURE 3.3 PROCESSES OF CURRICULUM DEVELOPMENT (FEU. 1987, p.57)

Sanclery (1984) details similar steps (See Figure 3.4) in the curriculum development process but usefully adds 'who does what' at each stage.

Brady et al. (1990) proposes a curriculum planning model for NSW TAFE that lists a linear set of activities in an algorithm that brings in and emphasises key decision-making notes. This model has been adopted somewhat for our purposes and is presented in Figure 5.1 (page 32).

Each of these representations provide useful information that help conceptualise the curriculum development process. All fail to indicate, however, what is a critical factor when considering curriculum development for a specific organisation (particularly in a time of major changes to the organisation) and that is **where the key decision-making points are located.**

Weaver (1975) cited in Kedney & Parkes (1988) looks at 'who decides what' in curriculum development (and other parts of educational policy making) in three stages: 'Formulation' - the locations where options for policy decisions are formulated and presented; 'Determination' - the locations in which a particular policy is decided; and 'Implementation' - the site of executive and managerial processes.

The changes in NSW TAFE (as elsewhere in Australia) suggest that the locus for 'formulation' decisions regarding curriculum development will move from departmental headquarters to the groups based on industry parameters (including the ITDs) where external forces (such as industry and government agencies) will exert even more influence. At the 'Determination' stage it seems that ITDs will provide the 'umbrella', but since curricula will invariably cross ITD boundaries it is clear that the locus of decision-making for curriculum development policy should be (and has been) placed at the group level. As far as decisions relating to implementation are concerned, it would be surprising if current trends in devolution of decision-making were not followed and the day-to-day management of curriculum development undertaken by a range of individuals and/or groups delegated with appropriate powers. This may be at the level of the ITDs, in the colleges, or even elsewhere. Blachford (1986) argues strongly for decentralised decision-making, particularly in the implementation of curricula, because TAFE's curriculum development and implementation strategies need to be flexible, responsive to need and striving for continual improvement.

> The centre has an overriding interest in stability, consistency and the development of commitment, and these qualities are in tension with qualities such as responsiveness to changing needs and constantly striving for improvement ...
>
> (Blachford 1986, p.25)

Nevertheless Blachford (1986) also argues that, in a democratic situation, the 'centre' has an obligation to the society as a whole to ensure that limited resources are equitably shared across the society. Both in terms of curriculum content and curriculum implementation, too devolved a system of decision-making could result in inequalities of provision and access.

THINGS TO DO	FACTORS RELATED TO EACH TASK	
Need	. student . society . industry	. observation . interviews . surveys . occupational analysis . labour force forecasting . statistics . literature reviews . advisory committees
Rationale	. need . demand . link with other courses . aims . classification	. methodology you will use to develop course . staff and resources needed to develop course
Approval to proceed	. TAFE authority . college administration	. established procedures . CEPD proposals
Objectives	. expected . student learning . outcomes	. style of objectives (e.g performance based)
Content	. criteria for inclusion	. time available . venue (college/workplace) . prerequisite skills of students
Design	. subject/modular	. resources . staffing . assessment . venue (college/work place)
Approval	. TAFE authority . training authority . college administration . industry association	. established procedures
Implementation	. teaching staff involved . staff development branch of TAFE authority	. extent of change in course . need to adopt new teaching methods . development of learning materials . teaching guides may be needed
Evaluation	. students . staff . college . industry association . TAFE authority . training authority	. observation . interviews with college administration, students, employers, etc. . questionnaires . analysis of student learning outcomes

FIGURE 3.4 OCCUPATIONAL CURRICULUM DEVELOPMENT A COMPLEX STRUCTURE (Sandery 1984, p.54)

Clearly there are conflicting interests which make the positioning of the loci of decision-making critical to any approach to curriculum development. Decisions made now will determine outcomes in the years ahead and so they have to be well founded and careful.

It is assumed in this paper that the techniques of curriculum development are well understood and it is known that there are highly skilled professionals in curriculum development employed by, and

available to, TAFECOM. Consequently the emphasis will not be on the detail of the processes but on the juxtaposition of those processes and the possible loci of decision-making and control.

Using this focus it is evident that previous practices in NSW TAFE, particularly in the area of accreditation, had the tendency to become involved and lengthy. (See the charts in NSW TAFE's procedures manual for course accreditation and control.) In this respect NSW was similar to other States in following the meticulous processes involved in providing a curriculum that met with all the specification requirements and with approval from most if not all the interested parties consulted. **The need for the future is for a more streamlined process with clearcut delegations of decision-making authority to enable quick response times.**

Russell (1983) suggests that the variations in the curriculum design and development process arise because of the variations in the decision-making networks within the system rather than any theoretical variations in the process per se. He proposes a nine box grid, Figure 3.5, with each box representing a key area for curriculum design and gives details of the results of research into the network of curriculum decisions that determine the relationships between the processes. These results indicate three curriculum development styles with respect to the relationship between the central body and the Further Education (FE) Colleges. They are:

- *examining body relationships*: where the central body exercises firm control over syllabus and examinations with little intervention in the curriculum decision areas of the learning situations at any levels or in content or testing at the 'lesson level';

- *validating body relationships*: where all initiative in syllabus and examinations comes from the college with central body monitoring and control, and where there is little intervention in the curriculum decision areas of the learning situations at any levels or in content or testing at the 'lesson' level; and

- *controlling body relationships*: where the central body maintains firm control over the syllabus either by setting it or strongly recommending it, monitors carefully local examinations and makes strong attempts to influence the other decision areas.

All are potential options for the relationship between ITDs and the college networks.

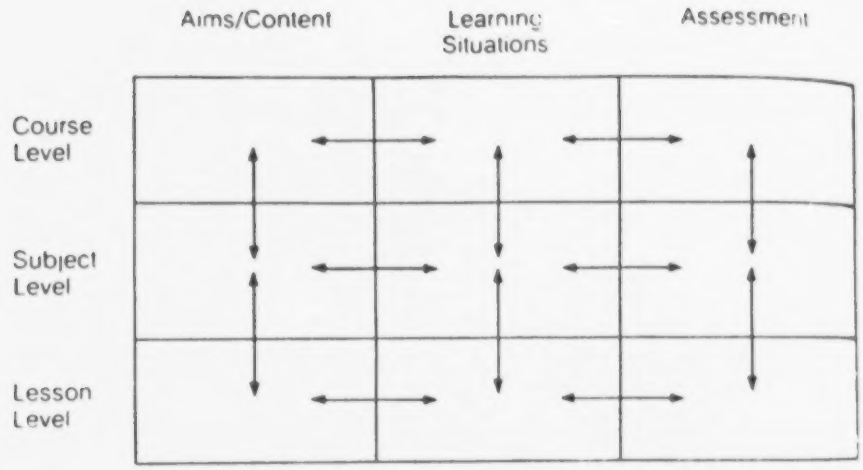


FIGURE 3.5 NETWORK OF CURRICULUM DECISIONS
(Russell 1983, p.302)

3.2.3 Where does the process end?

One of the vexed questions for this paper has been when the process of curriculum development ends. Like many questions in education there is no easy answer. The simplest answer would be that the process is complete after the program has been accredited by whichever processes are used. Accreditation is the recognition that the program has been scrutinised and has been found acceptable. Following this most courses are then subjected to a reaccreditation process after a specified period.

On the other hand, the design and development phases can be influenced by implementation issues. A curriculum can be designed to be very resource intensive in terms of the staff and time needed to design it, and physical and learning resources required to run it. Thus it is suggested that implementation issues need to be considered during the design and development stages to ensure that (amongst other things):

- the necessary numbers of suitably qualified staff are available to teach the program;
- the requisite buildings, classrooms and plant and equipment are (or will be) available;
- there are sufficient learning resources (e.g. library books, videos, etc.) available; and
- there is an adequate budget for consumables to support the program.

In Victoria (which has an accrediting authority independent of the State Training Board), the decision to accredit the course and the decision granting authority to conduct the course in a college are made by two different bodies. It therefore needs to be made clear when and by whom particular areas of the development process are going to be scrutinised and the key decisions made; in short who has responsibility for what.

It has been suggested that implementation issues should be considered during the design and development phases of the process. However the review phase is a step in the curriculum development process which is often overlooked. One of the criticisms often made of TAFE is that it is limited by:

- a heavy emphasis on the funding of educational inputs rather than the achievement of specified outcomes; and
- the absence of any suitable evaluation of program effectiveness.

(Skills for Australia 1987, p.33)

Thus TAFE puts considerable effort and resources into the creation of curricula, while relatively little is done to maintain the program after development by means of a review of program processes and outcomes. The initiatives in the performance indicators which are being developed and trialled in New South Wales are clear steps in the right direction. Nevertheless the role of review is not necessarily restricted to the end of the process prior to reaccreditation; it can be an on-going part of the development process. In this way the process becomes one which is more dynamic and continual rather than 'stop-start', characterised by a series of large peaks and deep troughs in activity. It can also occur at a variety of levels.

The development of curricula may be likened to a car being produced. There are quality control checks during and after the car has been built. It is scrutinised as a total entity and passed or sent back for further work. After its delivery and sale it (hopefully) fulfils the function for which is was designed, built and bought. No one would suggest that a car, after delivery, is not touched again. It does (or should):

- have regular routine maintenance; and
- (on occasion) have faulty, damaged or worn out components repaired or replaced.

When it has ceased to be useful it should be scrapped. It is much the same, potentially, for curriculum development and maintenance. Thus the curriculum development process adopted should consider using a similar model in which the weight and role of the review phase should be carefully evaluated.

In the context of this paper we accept that curriculum development is an on-going cyclical process. However, our chief focus will be its initiation.

3.3 The processes used in NSW TAFE

Course development for major award courses was usually undertaken by one of the 25 former schools or faculties, following consultation with the relevant advisory committees and departmental staff.

A four stage process was followed involving:

. approval in principle for course development (Stage 1);

. accreditation of a new course (Stage 2);

. approval to conduct an accredited course at specific college(s) or other locations (Stage 3); and

. reaccreditation of courses within 5 years of their previous accreditation (Stage 4).

The process itself is outlined in the Course Accreditation Manual of Procedures (1986) and in other departmental documentation.

The Stage 1 submission outlined the justification, anticipated structure and associated implications of the proposed or revised course. The Stage 2 submission involved the major curriculum development activities, making use of both school and curriculum support staff, along with school advisory committees, academic committees, review panels and the Board of TAFE Studies.

As the largest provider of technical and further education in Australia, it would be surprising if the NSW Department of TAFE were not seen as highly competent and experienced in the provision of quality post-secondary education and training. There is no doubt that current curriculum development practices have much to commend them, particularly in the thoroughness of the research and liaison with industry that precedes the development of documentation. Also the input from practising teachers in the process of design and development of teaching materials is a very valuable element.

The system clearly had a number of strengths, including:

- the procedures for 'checking' which occurred throughout the accreditation process, which usually resulted in a quality product;
- the use of curriculum development teams (including TAFE teachers as curriculum developers), which took advantage of internal expertise;
- the use of external review panels (which were seen as very valuable); and
- the revisions when made to curricula were Statewide.

In addition, the development process led to the thorough forecasting of resource needs, which was seen as very necessary. However, the process had a number of problems too. These are described in the following section.

3.4 Concerns about the curriculum development process

In a rapidly changing technological and commercial environment the claims of thoroughness of NSW TAFE's current curriculum research and development processes could be considered extravagant in the light of the short-term gains made. Although the input to curriculum development from practising TAFE teachers is invaluable, the often piecemeal methods of involving them in the design and development process on (for example) a one-day-a-week release pattern, meant that the time taken to develop curricula sometimes became unreasonably long. Certainly what is needed now is an approach that addresses these and other problems without unnecessarily sacrificing existing qualities.

The short-form curricula currently developed in NSW (and most other States and Territories) are not seen to provide sufficient detail to make informed decisions; neither are they seen as useful documents for teachers to work from. They are largely a means to gain accreditation. Long-form syllabi, on the other hand, are very time consuming to produce and it may be more efficient and effective to use teachers' time in the production of learning resources. In order to produce a useful document in less time therefore, a balance needs to be struck between unnecessary extremes of levels of curriculum documentation. **Nevertheless a major question is 'Useful to whom?' Is the primary purpose of a curriculum document to meet the requirements of the accreditation process or to be a useful resource to those responsible for <u>teaching</u> the course it describes?**

Curriculum development was discussed in the Scott Report (1989). Major criticisms of the current curriculum development procedures offered by Scott and others within TAFE itself were that the process could take too long and was inflexible, with cumbersome planning and accreditation procedures (Scott 1989). It was also very centralised. Nevertheless, even without the impetus provided by Scott, it was clear to many within NSW TAFE that things would and should change as a result of the pressures for micro-economic and industrial reform.

The report of the Curriculum Evaluation and Project Co-ordination Unit (CEPCU) (Salasoo 1990) details the problems in the area of curriculum accreditation and highlighted areas of concern. These included:

- poor quality of documentation;
- difficulties in arranging times for panels/committees to meet; and
- 103% increase in submissions in one year.

These concerns indicate it would be necessary to ensure that, whichever accreditation practices are adopted, those responsible for documentation

be trained sufficiently to enable the quality of documents to be developed to an acceptable level. Also the system of curriculum review should be streamlined.

In addition, staff in New South Wales TAFE interviewed by the project team reported that:

- initial curriculum research got 'bogged down' by the pure research methods used;
- accreditation takes too long;
- course development takes too long;
- some things were done without any real concern for costs;
- some released teachers do not have adequate curriculum development skills; and
- the system cannot cope with the 'backlog' of courses needing review.

With regard to curriculum development, Scott (1989) recommended that:

> as a priority TAFE should initiate fast-track planning to identify and interpret the implications of likely changes of industrial awards for TAFE's courses ...; (p.22)

and that:

> course development in TAFE should be subject to strict needs criteria to prevent duplication of provision and to optimise service-wide application ... (p.23)

Further, he recommended that:

> resources for course generation should be contracted on a project basis from both internal and external sources, with overall co-ordination through the joint consultation by the chiefs of (Industry Training) Divisions on an ongoing basis; (p.24)

and that:

> the primary task of the Industry Training Divisions should be to plan, co-ordinate and <u>contract</u> (our emphasis) the production of curriculum (in line with national, state and local needs). (p.24)

Thus ITDs were not seen by Scott as being involved in the actual drafting of curricula; they would be contracted to specialists within and/or outside TAFE. (The issue of where and who might undertake such development will be considered in later sections of this paper.)

Finally Scott recommended that:

> accreditation of vocational education and training courses in New

South Wales should be the responsibility of an independent accrediting authority, established under separate legislation from TAFE, and charged with the oversight of all accreditation and articulation between post-secondary skills and training organisations, including in-house business and industry training. (p.25)

The 25 schools have been disbanded and about 10 industry training divisions (ITDs) created in their place. These ITDs were suggested to conform with existing industry groupings. However Scott (1989) recommended that a senior TAFE panel (together with outside expertise) should finalise the most appropriate basis for the ITDs. At present there are ten. Scott (1989) suggested the following ITDs:

- Rural (including fishing and hunting);
- Mining;
- Manufacturing (including electricity, gas and water);
- Building (including construction);
- Transport and Communication;
- Retail and Wholesale trade;
- Business services;
- Government services;
- Community services; and
- Personal and Recreational services.

Haworth (1989) argued that the ITD structure, while providing a framework that lines up with ASIC, does not provide the most suitable classification system for the management of TAFE major awards since the ITDs so formed are very unequal in size and many of the major awards do not fit easily into any of the them. This paper will not attempt to enter into this debate (which is largely an internal matter for TAFECOM). However, the composition of the ITDs is an important factor in the shaping of any curriculum development approach. Consequently the proposed ITD structure will require that the curriculum development approach be such that it can accommodate the considerable amount of co-ordination between ITDs that will be necessary to develop the curricular content that will inevitably cross ITD boundaries.

The ITDs themselves are seen as small units (with a core of 6 to 10 highly qualified professional staff) with responsibilities in:

- educational planning;
- curriculum development;

- program delivery;
- student admission and assessment;
- accommodation and equipment;
- marketing and development;
- human resource management;
- library services; and
- monitoring and evaluation.

The functions listed are those outlined in a discussion paper (Functions of TAFECOM Colleges, Networks and Support Services) issued in April 1990.

They encompass the essential elements necessary for undertaking curriculum development functions in collaboration with the colleges and the small unit at Central Office concerned with education planning and quality assurance. This is consistent with a change to a Central Office which is rather more concerned with policy matters, with the resultant devolution of responsibility and accountability closer to the operating levels in the colleges themselves.

3.5 Other challenges facing TAFE curriculum development in New South Wales

Stevenson (1989) suggests that TAFE needs to develop curricula which meet both the needs of industry and individuals. This involves flexibility certainly, but it also requires that the primary purpose of a particular program be clearly understood. Purpose is a strong factor in dictating what is included in a program, and what is not.

Stevenson's paper also advocates the development of spiral curricula in which certain concepts are taught at progressively greater depth and breadth as an individual advances through a program of complexity. It is consistent with an approach where students move from wholes to parts, that is, viewing content in terms of increasing layers of detail. If TAFE graduates are to be equipped with conceptual skills to enable them to tackle 'life-long' education, then this 'spiral' type approach to curriculum content is important. However, another factor that will increasingly affect the structure of TAFE curricula is the challenge that industry and award restructuring poses for TAFE, its colleges and its courses.

Hall and Hayton (1989) have suggested that award and industry restructuring will have a major effect on TAFE course content and course structure. TAFE has the task of maintaining the balance between the need to develop the intellectual capacities of the individual - developing the learning to learn and other 'general' skills - as well as the need to provide the individual with the industrial/commercial skills - the learning to do skills. Consequently, curricula for courses preparing individuals for the new industry structure (of high skill, new technology and integrated

work organisations) will need to develop the individual's ability to:

- adapt to changes in technology;
- more readily transfer skills to new areas of specialisation;
- combine skills in two or more disciplines; and
- readily accept and seek retraining at appropriate points throughout their working life.

The new industry structure requires course content that provides for higher skills levels. There will need to be:

- greater emphasis on conceptual learning;
- greater emphasis on 'technological literacy', the social implications of technological change and quality concepts;
- the developing of 'learning to learn' skills; and
- the development of a broader awareness of the industry and industry restructuring in vocational courses.

TAFE courses will need to allow for both horizontal mobility (that is, between trades or subject disciplines) and vertical mobility (that is, between job levels and between academic awards or institutions).

The restructuring of some industries and the changes to industrial awards, work practices and skills profiles will have a significant impact on TAFE course structures and content. In the debate over the form of TAFE curricula much is currently being made of:

- changing skills profiles, in the light of industry and workplace reorganisation;
- retraining of workers to upgrade, broaden or extend their current profile of skills;
- career path development (whether the need to consider courses in relation to each other is important). This will lead increasingly to nested or sequential awards with a number of clearly specified potential entry and exit points. However, this means that the curriculum development process needs to be viewed more holistically than has been past practice. There also has to be a clearer link between a training 'award' and the related industrial award;
- recognition of the skills that individuals already hold;
- flexible, more responsive curriculum development techniques to cater for the needs of TAFE's diverse range of clients;
- move to competency-based approaches (see Foyster 1990) which will involve the development of appropriate training facilities, learning

resources and assessment methods and also nationally agreed standards as well as consistency in training to facilitate interstate transfer;

- changes in the learning process to focus on more open methods of curriculum delivery, including more workplace training, so that training is delivered how, when and where it is needed;

- adopting modular course structures to increase the flexibility of curricula and the choices available to clients;

- the need for adequate credit transfer arrangements so that individuals can move readily between educational sectors, providers of education and training, and awards; and

- a need to 'maintain' programs over their accredited period in order to keep them as current as possible and to avoid the need for their very significant redevelopment each 5 years or so.

In addition, the curriculum development strategies that New South Wales TAFE adopts need to take into account:

- the advisory structures that the ITDs and other levels in the system will use to gather information relating to the needs of the industry sector(s) they service (and the success TAFE is having in addressing these needs);

- the links that are finally established between the new Central Office structure, the ITDs and the college networks;

- the relationship between TAFE and existing industry training committees at both the State and National levels (ITDs may have to deal with several industry training committees (ITCs), and the responsibilities of ITCs may be split between TAFE's various ITDs). The relationship between TAFE and both Department of Industrial Relations and Employment (DIRE) and the Industrial and Commercial Training Council (ICTC) will also be of some significance to curriculum development processes;

- the relationship (and possible rationalisation) of the course offerings of college networks and individual colleges in response to the award restructuring process;

- the increasing use which will be made of nationally recognised curricula. In designing curricula a 'total curriculum' which recognises that training does (and needs to!) occur both on- and off-the-job must also be acknowledged;

- the need for staff development and (undoubtedly) changes in teachers' terms and conditions to upgrade, maintain and even broaden the existing vocational skills as well as orient them to the changes which will occur in the ways in which TAFE fulfils its role; and

- the nature of the accreditation processes which are proposed and implemented. This issue will be picked up subsequently in Section 5.

Finally, access and equity issues need to be kept in focus.

4. A FRAMEWORK FOR A NEW APPROACH

4.1 Introduction

While the Scott Report (1989) tends to emphasise an industrial/State economy focus for TAFE's activities, TAFECOM's corporate goals and objectives document indicates as well a distinct and strong 'social' mission (TAFECOM 1990). Hence the latter document has recognised the wider role that TAFE plays in the provision of education and training and acknowledges the importance of access and equity issues.

Brady (1990) has proposed the use of a futurist perspective in vocational curriculum development. If the curriculum approach focuses on the current situation and relies too heavily on skills audits, task analyses, and forecasts of human resource needs based on existent technology, then, given the time frame for throughput of students, an out-of-date education could result, or, at least, education that does not equip students for changes that undoubtedly will take place as they are entering their industry as qualified people.

In its dealings with industry, TAFECOM will have to continually emphasize to industry the necessity for including in their training not only currently required skills, but also possible future skill requirements. If we are indeed to become the Prime Minister's 'clever Australia' then investment in future possibilities will be all important. TAFECOM, to fulfil its charter, must include this future orientation despite pragmatic or shortsighted commercial considerations that might be foisted on it by industry, unions or government.

Sharlow (1982) has suggested that:

> curriculum research and development strategies adopted have been too concerned with observable skills directly and obviously related to a particular job and have not addressed important areas essential to a person being able to cope with the broad range of life experiences.
>
> (Sharlow 1982, p.iii)

The balancing of short-term pragmatic requirements and longer-term needs have always been important issues of concern for TAFE, but the balance cannot be lost, even although the balance point may shift.

This section attempts to outline some of the features which need to be borne in mind when judging the capacity of any new approach to curriculum development to meet New South Wales's needs. They are, essentially, important features of any good system of curriculum development.

An attempt has been made to be comprehensive in developing the list of criteria which make up the framework. Nevertheless it is likely that

other features may be added and it will be one of the activities at the workshop to discuss this list of features. Other features will vary in their weighting and importance according to the approach chosen, or in individual circumstances (that is, in the development of some curricula, certain features will be more or less important, dependent on prevailing circumstances). Each of the elements in the framework will be identified and discussed briefly if appropriate.

4.2 Features of good curriculum development

The following are suggested as criteria for a good curriculum development approach given the current circumstances of TAFECOM.

The approach must:

- **be cost and time effective.** It must be economic in its use of human and material resources and it must allow for speedy completion of each stage in the curriculum development process. To do this the level of documentation and the steps required must be appropriate to ensure that neither too much nor too little is done to satisfy the requirements of the curriculum development and accreditation process.

  In addition it must:

  - not undertake unnecessary development. If there are acceptable needs analyses or curricula available from interstate or overseas (or from national curriculum development) these should be evaluated and adopted (modified if necessary) thereby removing the need to undertake a full needs analysis coupled with curriculum design and development.

    TAFE can no longer afford to undertake curriculum development work merely because it has the capacity to do so or because there are unreasonable and parochial attitudes to materials produced elsewhere. The smaller States and Territories have developed considerable enterprise in rapidly redeveloping curricula obtained from other sources which gives them a very quick response time. It also requires considerably fewer resources and less effort;

- **take into account the new TAFECOM structure** - particularly the roles of the NSW TAFE and college networks and geographical disposition of NSW TAFE colleges likely to implement it. It should also be capable of being used in fee-for-service curriculum development to meet the needs of industry locally and at the State level. Major resource implications must be identified early. Also, curriculum innovations should be able to arise from specialist fee-for-service activities with subsequent incorporation in mainstream programs (and vice versa);

- **be relevant**. It must meet the needs of its target group and give them what they want. In addition it must:

- allow for client input. This could be done through advisory structures set up at both the ITD and college levels. The exchange of information between these levels within TAFE will be an important priority. Input will be needed not only to develop, but also maintain the curriculum - and the implemented course it supports. The process must be seen by all interested parties - employers, college staff, unions, the community, professional associations, licensing bodies - to be open to their input. Moreover it needs to be demonstrably supported by its client base. Teacher ownership at the implementation stage is particularly important;

- adopt a holistic approach. Courses should not be designed in isolation from one another. Thus a series of carefully articulated programs needs to be devised and not (as is often at present) without reference to other potentially relevant programs. The various courses and awards should also reflect prevailing industrial awards so that there is a sensible program of training for an individual's progression. This will enable individuals to increase or broaden their skill base readily, and receive appropriate recognition for it;

- take account of on-the-job training needs. Any holistic approach to education and training must recognise that training and assessment of competency occurs both on and off the job. TAFE curricula must in the future be comprehensive in their training response. If nothing else, the development of holistic training will force a dialogue between industry and TAFE over responsibility for training, the achievement of outcomes, and how this achievement will be judged;

- incorporate a futurist perspective during the design and development phase to allow TAFECOM to assist Australian industry by being proactive as well as reactive to technological and structural changes; and

- reflect the current dynamic state of Australian industry and commerce. The process must allow for rapid response and it should have mechanisms that allow ease of subsequent modification. It must also be appropriately 'maintained' so that any changes which occur within the period of accreditation can be readily incorporated.

- **be flexible.** Curricula must be written in such a way that it is adaptable to change and therefore can be readily upgraded without continual reference to some external body, such as an accrediting authority. It must have a range of entry and exit points and provide a series of possible career pathways and study options within the one structure to allow for maximum flexibility, thereby ensuring that both the industry and the individual student get the outcomes they want. In this sense courses will be increasingly offered as a range of modules - possibly employing a core and options approach. Therefore the curriculum must:

- adopt a modular approach where appropriate;

- have multiple entry and exit points, but within a holistic framework;

- articulate with other levels of study - particularly at the School - TAFE and TAFE-higher education interfaces. This is part of the process of providing a range of multiple entry points to TAFE programs offered at different levels; and

- take account of generic transferable skills. These include such skills as communication and problem-solving but also include such attitudes as approaches to safe work practices, and a concern for quality. These must be 'golden threads' running through curricula.

- **result in quality curricula**. The approach chosen must not compromise on the essentials of educational quality. Nevertheless the curricula must be at an appropriate level of quality. There is no point in designing a Rolls Royce when a Commodore would have been adequate. In addition, curricula must:

  - be useful to teachers - so that the document can provide adequate guidance in the development of assessment instruments and activities as well as learning resources for use in delivering the program. It must also be useful in the sense that it strikes an appropriate balance between the effort required to develop the curriculum and to implement it;

  - be easy to interpret - so that those within and outside TAFE (and especially those involved in its accreditation) can readily understand the document;

  - provide a framework for the development of learning resources and lesson plans;

  - employ appropriate learning strategies - including competency-based approaches if appropriate;

  - incorporate valid and reliable assessment procedures; and

  - be capable of being upgraded readily.

- **incorporate relevant national standards and awards at the State level.** This will involve implementing national standards (and any associated testing procedures) developed as part of the award restructuring process at the State level. In the past it is likely that the implementation of national curricula has not been as consistent as it could have been and that substantial differences therefore still exist in content, emphasis and nominal course hours between the various States and Territories. This, in turn, can make interstate transfer and licensing problematic - a factor which nationally-based industries cannot (with good reason) understand; and

- **consider issues of access and equity.** There must be clearly stated entry criteria and student selection procedures. Care must also be taken to ensure that individuals receive appropriate credit for their previous formal and informal training and life experiences.

5. SOME ALTERNATIVE APPROACHES TO CURRICULUM DEVELOPMENT

5.1 Introduction

This section will:

- enlarge upon the 5-step curriculum development process described in Section 3;
- propose some possible approaches which the ITDs could use to fulfil their role as the focal point for TAFE's curriculum development activities; and
- raise a series of issues which need to be considered in deciding which (if any) of the approaches proposed should be considered further.

This will be done in the context of the framework established in Section 4. However the elements making up the framework (together with some of the issues outlined in Section 3), the decisions made (and who makes them) will certainly need to be debated and clarified.

5.2 Steps in the curriculum development process

The curriculum development steps described in Figure 5.2 can be usefully viewed as a 'model'. The function of a 'model' for curriculum development is that it organises information in such a way as to assist our understanding. Furthermore, a model provides a basis for action.

Figure 5.1 (which is an adaptation of the one developed by Brady et al. 1990) represents a possible linear model of the major curriculum processes that require attention in any attempt to establish curriculum development procedures.

The processes take place within the framework of a set of curriculum development policies which will outline the standard procedures, use of pro-formas, delegations of powers, methods of decision making and other key areas of administration and management of the entire process. Although not singled out from the other aspects of policy it needs to be emphasised that the commercial orientation of TAFECOM's operations will feature as a significant part of the underlying policy framework for the curriculum development process.

For the development of all vocational curricula the processes will also take place within a framework of industrial liaison. This may differ from previous practice, at least in emphasis, since liaison with industry is not seen as merely a part of the process - such as the inclusion of industry representatives in specific activities - but rather as a part of the context or environment in which all the processes take place and where the liaison process is an on-going part of the responsibilities of ITD and college staff alike.
Although the diagrammatical representation of the steps in Figure 5.1 is

linear this is not meant to infer that there will always be a strict chronological order, and it will certainly be the case that for some curriculum development approaches the number, order and emphases on specific steps could vary. The process also feeds back and is cyclical.

The process begins with a needs analysis (see Hayton et al. 1988), culminating in the decision for the necessity or otherwise for a new or revised course. Both ITDs and college networks participate in this process; so too do industry training committees. Need has two elements - labour market needs and demand (given any existing provision). It may also lead to establishing whether or not a training need exists (see Hayton & Hayes 1989). In the past, needs were established by industry survey, but increasingly, group process methods are being used (see Anderson & Jones 1986a, 1986b).

Having identified a need, a skills profile is developed and (increasingly) a series of statements which help to define the outcomes and standards to be achieved by the program is produced. This (of course) is part of the move towards competency-based approaches. In the UK functional analysis is being used to set performance criteria (see Fennell 1989 (ed.)) and it should be noted that the discussion paper developed by the National Training Board (NTB 1990) on setting National skill standards follows these UK approaches very closely.

A program outline, which forms the bulk of the curriculum document, is then developed. The elements included in this outline are indicated in Figure 5.1. The identification of the resources required to run the program are also part of the development process and the ITDs will assist the Manager, Resources Planning in determining these. All these steps make up a curriculum document and are the pivotal part of the development process. Once the curriculum document has been prepared fully, the final step would be to obtain the approval of any advisory structures that had been assembled to help prepare it and provide advice about its quality. (The nature and extent of these advisory processes are important areas of debate since this is where the balance between speed of development and the amount of client consultation and support needs to be struck.) Following approval it would then go forward for formal accreditation.

The formal accreditation process may merely determine whether or not procedures have been satisfactory and be, for the most part, a formality. Alternatively, the accrediting body may have its own advisory structures to which the documentation would be referred for careful screening. (This issue is picked up again in Section 5.4.3.)

Following accreditation, authority to conduct the course would be sought. (The question for TAFE in New South Wales at present is who has, or will have, the power to grant this authority - and on whose advice?) The program is then implemented and run. Staff development, course marketing and the development or adaptation of learning resources are particularly important here. However the development of assessment criteria and techniques will become more important than previously for two reasons: firstly because of the move to competency-based approaches and, secondly, the need to give proper recognition to prior training.

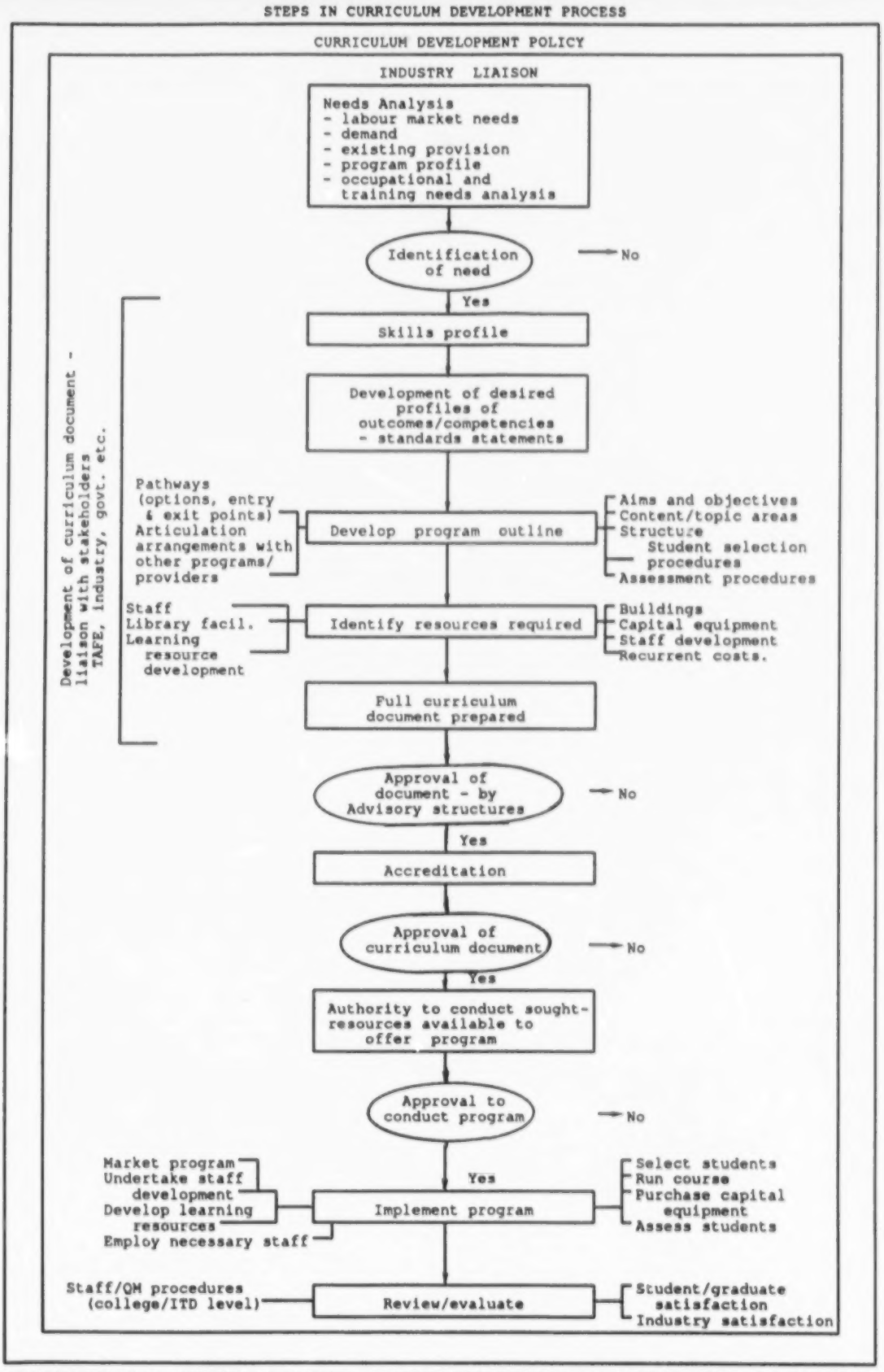


FIGURE 5.1 STEPS IN THE CURRICULUM DEVELOPMENT PROCESS

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During implementation and in subsequent running over the accredited period, the program should be the subject of quality assurance procedures aimed at judging its overall effectiveness, and maintaining (and improving!) its quality. The procedures should also aim to upgrade content and other aspects of the program which affect the extent to which it is seen to meet clients' various needs.

5.3 Some alternative approaches

A number of approaches could be successfully used to serve TAFECOM's curriculum development needs. Further it need not be that only one approach is used for all circumstances. As Mack & Jamison (1989) noted:

> Each curriculum development activity is ...unique. The issues may often be similar; the range of solutions varied. It is a problem-solving activity, where no single answer may be correct or necessarily better than another. There is no 'one right way to do' curriculum development; no single universally applicable model; no standard set of procedures, formats or resources. This does not mean that every approach to curriculum development is equally effective; clearly some ways will be better than others, according to the value systems of the decision-makers, and the criteria that the developers apply to the situation.
>
> (Mack & Jamison 1989, p.2)

It could be useful to consider approaches in terms of their position along two important continua; the extent of the use of external resources (both human and material) and the level of control over the processes and content held by the ITDs (see Figure 5.2) using these criteria. Five typical approaches will be considered: 'In-house', 'Project', 'Contract', 'Import' and 'Multi-model'.

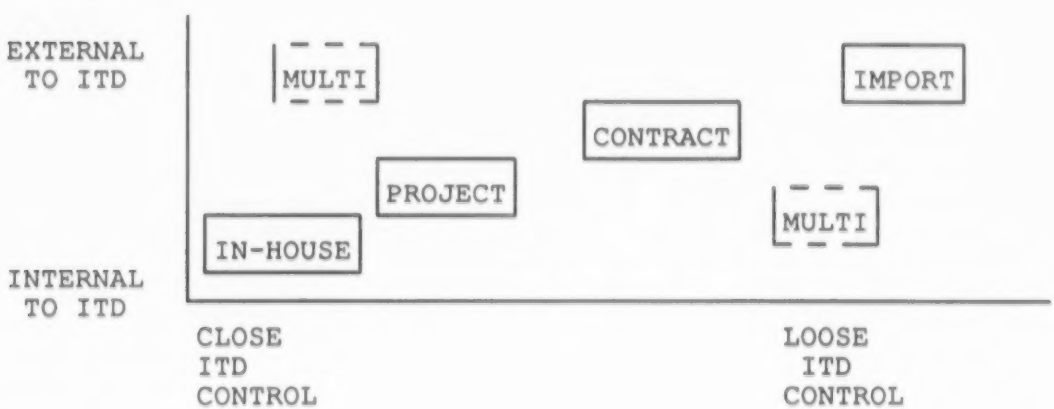

FIGURE 5.2

Following are brief descriptions of these approaches with suggested advantages and disadvantages.

5.3.1 Import approach

This method is suggested in order to minimise the resources used in developing curricula in New South Wales. Each ITD has a responsibility to undertake research to identify National and State skill needs and trends, and to monitor national and overseas developments in industry and education. Therefore ITD staff would be specifically assigned to identify curricula from interstate and overseas sources, from other TAFE organisations, and private providers (including those based in industry) for immediate use - or adoption with modifications. Suitable curricula and other materials could also be developed using such sources as national projects conducted under the auspices of the Australian Committee on TAFE Curriculum (ACTC) as well as from college-based short course development. The imported documents would be evaluated by a panel made up of ITD, college and industry experts.

In some cases such materials may be acquired free of charge. In others, there may be a cost imposed to offset development costs by the body owning the curriculum. In passing it should be noted here that one of the functions of the ITD is the Statewide (and, where appropriate, National) marketing of curriculum: ITDs should also be looking at marketing opportunities for their products.

Smaller States and Territories (Tasmania and the ACT) have adopted this import approach with considerable success.

ADVANTAGES	DISADVANTAGES
. Cost-effective where curricula already exist that are suitable and available at an acceptable price	. Legal implications of copyright
. Potentially a rapid method of development; means that curriculum development could be better co-ordinated nationally, with responsibilities for development being shared	. Significant adaptation may be required to suit local needs
. Good potential articulation at State/Territory level. Curricula and assessment processes and standards become more national	. Costs of purchasing the rights to use the curriculum may be such that there is little cost advantage in adopting such an approach
	. Level of 'ownership' at college level may be relatively low
	. No inherent course maintenance mechanisms available

ADVANTAGES (cont.)	DISADVANTAGES (cont)
. Avoids waste of resources and unnecessary curriculum development	. Imported curricula may contain cultural and other differences which (if not translated) will make them unacceptable to students, teachers and industry
. Opportunities for interstate or joint (or rationalised) development of curricula	

5.3.2 In-house approach

In this case the ITDs themselves would develop the curriculum documents as much as possible. This would require an adequate number of staff with curriculum development expertise within the ITDs and (if possible) subject expertise as well. Additional support could be sought from college staff (who would be subject experts) seconded (on block release for preference) with the ITD providing funds to the college to back fill the seconded staff member's position. This, essentially, represents a somewhat more decentralised approach to that which has been used in New South Wales to date. Such an approach (albeit in a more centralised form) is used by TAFE in South Australia and other States. The development of each curriculum would be managed by the ITD staff member concerned.

ADVANTAGES	DISADVANTAGES
. ITD retains strong control over the curriculum development process	. (Potentially) poor feeling of ownership at college level (particularly where a program is likely to have a number of providers)
. Quality control/assurance mechanisms more readily managed than in more 'devolved' systems of development	. No inherent course maintenance mechanisms
	. Strong level co-ordination needed between ITDs to ensure that the development of essentially similar curriculum is rationalised

5.3.3 Project approach

The curriculum development activities co-ordinated by the ITDs would be commissioned on a project-by-project basis using 'consultants'. These consultants might be:

- one or more staff at a particular college;

- a team of staff drawn from a number of colleges;
- individual TAFE teachers working out-of-hours;
- an individual external consultant;
- a group of external consultants, or a private company.

In this case, the ITD and its staff would be responsible for drawing up a project specification which would include:

- background;
- terms of reference or aims;
- desired outcomes;
- outline of the proposed methodology, (including any advisory/steering committee structures, etc.);
- a budget; and
- time line or specified finishing date.

After development of the specifications the project could be let to tender on a general or restricted basis; or an identified individual, group or organisation commissioned to undertake it. They would then complete the work according to the prepared specification, with ITD staff having a project management/external quality control function.

ADVANTAGES	DISADVANTAGES
. Curriculum development responsibility devolved - ITDs can pursue a wider range of initiatives because the development process is not so labour intensive for them	. Level of quality likely to be potentially difficult to control
	. Loss of control by ITD, need for good monitoring procedures
. Opens curriculum development to a wide range of individuals, groups and organisations	. Although good for initiation, has no inherent course maintenance mechanism
. Project management skills for curriculum development are generally well understood and established	. Ownership problems at college level could occur with curricula produced by external agencies because of a possible lack of teacher input

5.3.4 Contract approach

In this approach an individual college or a consortium of colleges would contract with the ITD to develop and maintain curricula in an area where the college(s) had particular expertise. In this sense it is very much like the 'designated provider' system currently used by the State Training Board in Victoria. This would probably involve the ITD negotiating a contract with the specified designated provider to offer this service for an agreed sum of money over an agreed period. The decision about which providers to accept could be on the basis of letting a tender, or by invitation. There would probably need to be mutually agreed performance criteria written into the contract and appropriate 'escape clauses' for use by one or both parties in the event of failure to perform (which would be of particular concern to the ITD) or other concerns arising during the duration of the contract. This approach, of course, would enable the designated provider to use a variety of techniques (import, project, in-house approaches) for the curriculum development for which they were responsible.

ADVANTAGES	DISADVANTAGES
. Long-term commitment made to development and maintenance of curricula. There is a chance of real expertise being developed and maintained at college level	. Consultation may be a problem if the designated provider chosen does not perform its liaison function well
. Ownership should be enhanced because development occurs largely at the college level	. (Potentially) difficult to replace/remove an unsatisfactory performer
. Is a suitable system for both curriculum development and maintenance	. May be difficult for the ITD to manage the process because it has given up a considerable level of immediate control to the colleges
. Curriculum development capacity would be needed at the college level	. May lead to the development of large and ponderous consultation mechanisms which are not integrated across the Division's operations
. Consultation will be very much at the 'coal-face' level between the provider and user of TAFE services	

5.3.5 Multi-model approach

This approach proposes that curriculum development is done on the basis of whatever procedure is most expedient given the prevailing circumstances.

For example, where an appropriate curriculum can be bought in from outside it is. If importing is not possible then other methods such as those described above are considered and the most suitable one chosen.

The curriculum development for a particular area may take place by using a project commissioned by the ITD which, following development, has its further development and maintenance contracted to a college or college consortium.

ADVANTAGES	DISADVANTAGES
. Very flexible	. Could get bogged down at the decision-making stage in cost-benefit analysis on merits of various methods
. Potentially greater control for ITDs over contract and project approaches	. Could be difficult to maintain system-wide consistency of quality

5.4 Some issues related to the proposed approaches

A number of issues need to be considered in the light of the processes proposed. These include:

- policy development;
- advisory structures for ITDs and curriculum development;
- accreditation of curricula;
- quality assurance;
- staffing of the ITDs;
- co-ordination of ITD activity; and
- budgets for curriculum development.

These will now each be considered in turn.

5.4.1 Policy development

Policy development will be the responsibility of the Manager, Education Policy (who reports to the Group General Manager, Education Planning and Quality Assurance). Curriculum development must not take place in a policy vacuum and so a high priority is the development of the policies and guidelines needed to support the development and implementation of

the chosen approach(es) to curriculum development. Part of this development will be concerned with decision-making rights and responsibilities of the various levels within the Education Planning and Quality Assurance Group, and at the college level. Victorian TAFE has recently established a working party to prepare a curriculum development policy for their system.

5.4.2 Advisory structures

The relevant NSW documentation studied in the preparation of this paper and the discussions held with staff in New South Wales have not made it clear what advisory structures will be used to gather information from TAFE's stakeholders and clients. These will include:

- government and government departments (State and Commonwealth) and State government authorities;
- employer and employee organisations;
- professional associations;
- licensing bodies;
- the accreditation body; and
- a range of other interest groups.

Much of what has been done, and will be done, will be aimed at rationalising present advisory structures (Victoria found they had over 100 advisory committees. These are now being rationalized to a far smaller number of Industry Training Boards. (It is estimated that eventually 16-20 will exist.) While college networks will have a so-called Network Industry and Community Reference Group, the advisory structures for the Educational Planning and Quality Assurance Group (and, in particular those supporting the activities of the Manager, Basic and Pre-Vocational Education, the Manager, Technical and Vocational Education and the ITDs themselves) are by no means clear. Nevertheless care will need to be taken to avoid the creation of large and unwieldy advice-giving structures, as well as ones which do not pass their advice between levels (local, State and National),or across levels.

5.4.3 Accreditation

In the revised system, course accreditation will be the responsibility of a separately constituted accrediting authority. While such a system is workable, some care is needed. There is a need to have the roles of the organisations seeking accreditation and the body providing that accreditation clearly understood. Stevenson (1989) highlights the problem neatly by pointing out that accreditation arrangements have brought with

them a certain cost, including:

- a duplication of certain procedures;
- a large human resource effort;
- a large funding requirement; and
- a considerable bulk of documentation.

He argues:

> The relative benefit of devoting the same level of effort to other aspects of the provision of vocational education, for example, the development of learning materials, must be considered.
>
> Given the extent of industry consultation in curricular design in TAFE, the degree to which TAFE has adopted the accreditation procedures used in the advanced education sector needs to be reviewed. For example, the TAFE sector could rely on:
>
> - speedy (less consultative), responsive curricular design coupled with rigorous accreditation procedures; or
> - speedy, responsive accreditation procedures coupled with rigorous (more consultative) curricular design.
>
> Since the case for good articulation to and from TAFE courses is compelling, some mutual recognition of accreditation procedures across the tertiary educational sector is necessary. Hence, the first alternative seems to be the more desirable, because of the need for:
>
> - external accountability;
> - strong articulation arrangements; and
> - enhanced devolvement of decision-making and subsequent transference of responsibilities to colleges.
>
> Such a shift would also release curricular development resources for instructional design activities concerned with meeting student needs in the implementation of courses.
>
> If the former alternative is accepted, together with far greater autonomy for colleges in the area of curricular design, then the need for retention of many of the existing features of any new accreditation procedures will be important.
>
> For these reasons, the removal of duplication should be achieved by a shift in curricular design effort away from those areas which are adequately handled by accreditation procedures, for example,

recognition of courses by industry, other educational sectors and the wider community. Curricular design could then focus more on analysis of skills, instructional design and delivery techniques. It could also concentrate on speedier development of submissions for accreditation.

Similarly, the extent of duplication between accreditation and registration processes needs to be scrutinised carefully and reviewed.

Another aspect of accreditation which will need continual review is the scope of the procedures. The extent to which procedures for TAFE courses should replace other community recognition/ regulatory processes is questionable. Examples of other processes where replacement by state accreditation procedures might occur, but would seem unnecessary, include:

- qualification for membership of professional associations;
- recognition of privately provided vocational education and training; and
- licensing; and regulation of entry to occupations.

(Stevenson 1989, p.45)

The issues Stevenson raises here need to be discussed and resolved during the preparation of the legislation to establish the proposed accreditation body in New South Wales.

5.4.4 Quality assurance

A quality assurance policy is currently being prepared for New South Wales TAFE which takes into account quality planning, quality control and quality improvement. The work previously undertaken in NSW in the areas of performance indicators, plus the Centre's work (White 1987, Guthrie et al. 1986, 1988, Guthrie & Foyster 1987, Guthrie 1988) will be of relevance here. Quality assurance practices are in line with the principle of course maintenance, which has been heavily emphasised in this paper. It is suggested that courses need to undergo a process of continual review and upgrading to better meet emerging needs (or those previously identified). Such maintenance should provide compelling evidence of its perceived effectiveness and relevance at the point when a course is reaccredited. To enable continual change and review, a number of features of the curriculum development and accreditation processes will be needed. These are:

- curriculum documents which are adaptable to change and are therefore written in a form which makes them as non-prescriptive as possible; and

- an accreditation process which allows courses to be modified readily and as necessary during their accreditation period.

However, this means that TAFE, particularly at the college level, must be open to change and accept the responsibility for ensuring and enhancing quality - as well as delivering a quality product to the customer! It also means that while maintenance is an aim (and modular systems of curriculum design will help here), one should not (to go back to the car analogy) continue to repair 'the old banger' when it should really be scrapped. A proper balance therefore needs to be struck between curriculum maintenance and repair on the one hand, and its replacement on the other. The difficulty, however, will be deciding when a curriculum is, actually, beyond repair. As in many other things there can be a tendency in curriculum work to patch when replacement is the proper option.

5.4.5 Staffing ITDs

Clearly the full purpose and role of ITDs needs to be established in order to determine their number and type of staff. To this end the ITDs and others within the Education Planning and Quality Assurance Group need to establish the balance between the various roles envisaged for the ITDs. With respect to curriculum development it may be necessary to have:

- curriculum development skills;
- project management skills; and
- knowledge of, or experience in the industry(ies) served by the ITDs.

Staff development for ITD personnel will be required; its amount will depend on the balance between the skill demands of their job and the skills they bring with them. The number of staff each ITD will contain (6-10 is suggested) will depend on the extent to which the ITDs are involved in the 'hands-on' of the curriculum development process, or whether they have more of a 'managing' or 'networking' role.

5.4.6 Co-ordination of ITD activity

The effective co-ordination of the ITD's curriculum development activities will clearly be very important in ensuring that course elements (such as modules or subjects) are properly articulated and therefore have the necessary cross-crediting arrangements. In addition, it will be important to ensure that generic units in areas such as communication, problem-solving, occupational health and safety, quality and manual skills (use of hand tools etc.) are used across the system, and adapted appropriately where necessary by the provision of relevant learning resources. In addition, it will be essential to ensure that ITD staff, and those within the college networks with clearly identified responsibilities for curriculum

development, develop and maintain suitable special interest networks of their own to ensure that information is regularly shared and to provide a basis for both policy formulation and staff development. This was found to be necessary when Victoria developed a curriculum development capacity at college level: the network remains viable and an important voice in curriculum in that State.

5.4.7 Budgets for curriculum development

It is clear that each ITD will need to have a budget line to devote to the curriculum development for which it is responsible. Dependent on the method chosen, that budget will either:

- be flexible on a year-by-year basis (because, essentially, project-based methods are used); or
- have certain fixed recurrent costs - particularly if longer term development and maintenance contracts are let to the college networks.

Other features which need to be considered would be annual increments to take account of changes to the costs of supporting the curriculum development function. Essentially these would reflect levels of work and costs of service (salaries, maintaining committees etc.). Therefore it seems appropriate to use a core and contingency approach at ITD level. Secondly, some flexibility would have to be maintained at the group level to allow for appropriate funding to be devoted to ITDs where there is a high level of technological change, or where changes in training are occurring due to the industry and award restructuring processes. It is likely, too, that many of the previously hidden costs of curriculum development will be revealed for the first time. Therefore setting budget lines will be a difficult process initially until the system has had some experience with its new methods of operation. Previously the system has operated on significant amounts of goodwill, out-of-hours work and other inputs that are difficult to quantify.

6. SUMMARY AND CONCLUSIONS

This discussion paper has attempted to propose possible curriculum development approaches suitable for use by TAFE in New South Wales in the light of:

- changes brought about by the micro-economic reform of the Australian economy - specifically through industry and award restructuring;
- the findings of the Scott review of TAFE in New South Wales; and
- the features of a good curriculum development practice.

As such this paper represents a reference point for further discussions, action and decisions. This process will begin with a 2-day workshop in late May 1990 at which the issues raised and the curriculum development approaches proposed will be considered.

Five approaches to curriculum development have been suggested (the 'import', 'in-house', 'project', 'contract' and 'multi-model'). All have advantages and disadvantages. Some of the approaches suggested might be readily dismissed, but most should contain elements which will be useful to whatever approach(es) is finally adopted in New South Wales. The paper suggests that one of these be adopted to provide a basis for discussion during the workshop.

6.1 Proposed approach

Given the recent history of curriculum development in the New South Wales Department of TAFE and given the new TAFECOM structures, it is proposed that the 'contract' approach be adopted in the first instance. This is suggested for the following reasons:

- it allows the best opportunity for consultation between the ITD, the provider and the users of TAFE's services;
- it allows the direction of resources, specifically where they can best be used and removes a potentially significant workload from ITDs;
- it is sufficiently flexible to allow some of the advantages of the other approaches to be used. For example, it allows for the importing of existing curriculum materials; and
- it provides for ownership, in that the users of the curriculum will most likely have an involvement in the development and certainly an involvement in the maintenance of what is produced.

However, each of the other suggested approaches needs to be examined in the light of the criteria that have been suggested as desirable features or outcomes of good curriculum development practice. It may be necessary to add to, separate or combine the features listed in Section 4. Some of them may be inappropriate and should be eliminated.

It may also be necessary to determine (after the workshop) how important, relatively, each of the features is in order to assist in the selection of the approach(es) to curriculum development that best suit TAFE in New South Wales.

6.2 The workshop

The curriculum development process was outlined in Figure 5.1. It needs to be established that this diagram contains all the key steps in the process.

It is realized that many of the participants in the workshop will be very experienced curriculum developers. It is not the purpose of the workshop, therefore, to deal with curriculum development techniques per se. The emphasis will be on a co-operative effort to establish:

- the major desired outcomes of the curriculum development process for TAFECOM;
- the key steps of the curriculum development process;
- possible alternative approaches for each step;
- the key decision nodes for the process; and
- the key decision-makers at each node.

This should enable each of the groups at the workshop to consider the alternative approaches and thus make recommendations and suggestions as to how each of these steps could be carried out - always bearing in mind the desirable features of the process. In particular it will be important to determine whether all the key decision-making points and decision-makers in the suggested development process (Figure 5.1) have been identified.

In framing a revised curriculum development policy and guidelines and proposing possible approaches (which must be a high priority for TAFECOM) it will be important to establish:

- What decisions have to be made?
- Who will make them?
- When will they be made?

- What information is needed to make the decision?
- Who is responsible for providing the information? and
- What will happen after the decision has been taken?

This decision-making process needs to occur in a climate where speed, quality and cost-efficiency are appropriately balanced. Throughout this paper it has been stressed that the approach chosen will have to balance the resources committed to the maintenance and creation of curricula.

It must also be acknowledged that TAFE will no longer accredit its own programs (and those of private providers in New South Wales) and therefore its role in relation to the new accreditation agency should be clearly established and understood. TAFE in New South Wales needs to develop a view on the role it will play in the development of the legislation to establish this independent accreditation body. TAFECOM also needs to establish and express firm views on how it proposes the accreditation process operates in the context of curriculum development. Because of its experience in this area, TAFE can provide helpful advice to those framing the legislation for the new accreditation body.

Selection of a likely approach then needs to be made and some of the workshop's time devoted to how the chosen approach would operate. Later, after the workshop, questions of its implementation and continued use would need to be considered. However all of this should occur within the framework of the issues raised in Section 5.4, together with the deliberations about the key decision-making points in the development process. Finally questions of choice and implementation of curriculum processes should be considered in the context of the advisory structures established by TAFE (particularly the ITDs) and designed to gather information and advice from industry, commerce and other key stakeholders on TAFE's perceived role and expectations for its future efforts.

The workshop therefore may not consider all the issues that need to be addressed. Certainly it will not answer all the questions those who attend will have. However the workshop should provide a valuable focus point for subsequent work which will lead to the successful development and implementation of new curriculum policies and development methodologies by August next year.

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APPENDICES

1. Project brief
2. List of individuals interviewed
3. Interview schedule

RESEARCH PROPOSAL

CURRICULUM DEVELOPMENT PROCESSES IN NSW TAFE

INTRODUCTION

This submission is put forward by the TAFE National Centre for Research and Development. It proposes the preparation of a brief research paper on models for curriculum development for vocational courses offered by the NSW TAFE Department. In the light of the present restructuring of the Department the paper will examine alternative processes for vocational course development in relation to:

- the identification of industrial needs;
- the streamlining of curriculum development processes; and
- the need for flexibility and innovation.

AIM

To present to the NSW TAFe Department a report detailing alternative models of curriculum development to assist the Department to choose an appropriate model that will meet the current and future needs for an efficient, effective and streamlined curriculum development process. The report will form the basis of a one-day workshop to be conducted in Sydney.

RESEARCHERS

The research team will consist of a principal researcher and a project consultant.

The PRINCIPAL RESEARCHER will be Mr High Guthrie. Mr Guthrie is a senior research and development officer with the TAFE National Centre for Research and Development has a long-standing and comprehensive knowledge of Australian TAFE systems. He has been involved in a wide range of research projects in the area of curriculum development in vocational subjects and is a highly respected authority in TAFE curriculum matters. Mr Guthrie will oversee the project and advise the project consultant.

The PROJECT CONSULTANT will be Mr John Bone. Mr Bone has had a long and varied career in technical education and industrial training. He is currently Manager for Training in a major Australian public enterprise and has considerable experience in curriculum development work at levels ranging from senior secondary school to university graduate diploma courses. He has recently been involved in two major research projects with the TAFE National Centre, involving industrial training models and the evaluation of DEET funded initiatives. He brings to the project a viewpoint which, although familiar with TAFE, is none the less external to it.

METHODOLOGY

Given the time constraints and scope of the project the methodology will be limited to include the following:

Research and data collection:

Major recent publications on curriculum development methods and models will be researched and relevant material examined for its usefulness in the project.

Interviews and discussions with TAFE personnel:

Key individuals in NSW TAFE Department will be interviewed as will some relevant individuals from other State systems to ascertain current views and opinions on alternative curriculum development processes.

Construction of curriculum development models:

A number of generic curriculum development models will be suggested using the information gathered from the above research and these will be described in the report. their strengths and weaknesses will be discussed. In addition, the issues needing to be considered if the model were to be adopted will be considered briefly.

The report may also made recommendations about, or discuss, the models most likely to be suitable to TAFE's needs given the changes to TAFE already in train in NSW and the likely directions external to TAFE which will affect the nature of both future TAFE curricula and curriculum development processes.

Presentation of draft report for feedback:

The information will be presented initially in a draft report to which comments and suggestions from senior NSW TAFe personnel will be sought. For this purpose the project consultant will visit Sydney for two to three days to discuss the draft report with personnel identified by NSW TAFe.

Preparation of final report for approval:

Using these comments gathered in the project phase above a final report will be prepared and, following approval from TAFECOM in NSW this will be printed for circulation by TAFECOM to individuals who will attend a one-day workshop organised by the project team in consultation with staff in NSW TAFE.

Delivery of a one-day workshop:

A one-day workshop will be run in Sydney by the principal researcher and project consultant to explain and discuss the report.

The report:

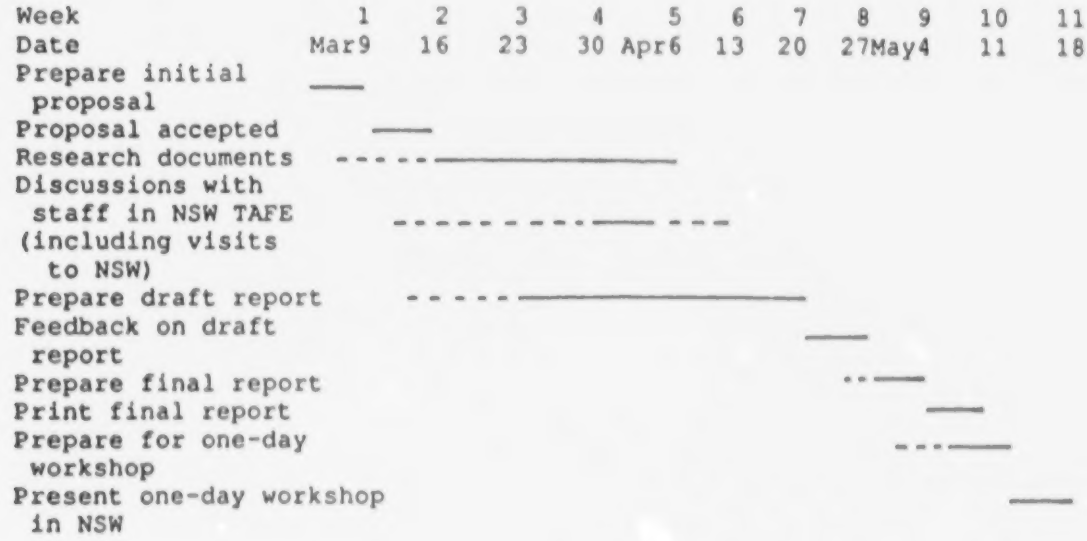
The report will include the following:

- an introduction discussing the background to the project and briefly describing the methodology;
- a chapter which puts the curriculum development process in the context of current changes in TAFE and industry. This will be used to identify likely trends in the form of curricula and in the processes of curriculum development;
- a chapter summarising the report and drawing any appropriate conclusions. Recommendations could be made, or a suggested model or models nominated if appropriate; and
- finally, references cited and appropriate appendices would be included.

It is anticipated that the final report would be of the order of 25-30 typed A4 pages. It would aim to be short, readable and to the point.

Timeline:

The project would be completed over approximately an 11 week period.


Week 1 2 3 4 5 6 7 8 9 10 11
Date Mar9 16 23 30 Apr6 13 20 27May4 11 18
Prepare initial proposal
Proposal accepted
Research documents
Discussions with staff in NSW TAFE (including visits to NSW)
Prepare draft report
Feedback on draft report
Prepare final report
Print final report
Prepare for one-day workshop
Present one-day workshop in NSW

List of people consulted in the development of this paper.

Interviewed personally

Carol Benn	Manager, TAFE Joint Ventures
Paul Brady	Chief Education Officer Directorate of Studies
Chris Campbell	Head of Division School of General Studies
Alan Drew	Chief, Industry Training Division Management and Business Services
David Haworth	Principal Education Officer Directorate of Studies
Ian James	Acting Head of Division Food School
Neil Jones	Principal Research Officer Surveys and Evaluative Studies
Les McCotter	Manager, Technical and Vocational Education
Rod Masterson	Chief, Industry Training Division Building and Construction
Bruce Meldrum	Chief Education Officer Directorate of Studies
Rilda Mossop	Senior Education Officer Directorate of Studies
Jeanette Shimeld	Head of Division, School of Nutritional Management
Alan Soden	Head of Division School of Fitting & Machining
John Spindler	Head of Division School of Building
Greg Woodburne	Group General Manager Education Planning and Quality Assurance

In addition, other present and former staff of the Department of TAFE in New South Wales were contacted informally.

Contacted by telephone

Dr John Hainsworth	Director, Curriculum and Programs Office of TAFE Western Australia
Mr Geof Hawke	Acting Head, Industrial Restructuring Task Force NSW Department of TAFE
Mr David Ramsey	Director (Studies) NSW Department of TAFE
Mr Wayne Smith	Assistant Director South West College of TAFE, Victoria and Head, Victorian Curriculum Development Network

Attended R & D Meeting at Centre

Mr Roger Mathers	Director Industry Restructuring and Development Branch SA Department of Employment and TAFE

INTERVIEW SCHEDULE

1. What procedures are currently used to develop curricula in NSW TAFE?

2. What have been the strengths of the current system?

3. What have been its major weaknesses?

4. Given changes in the climate "out there" in industry, commerce and the community (including award restructuring, competency-based training etc.) what do you see as vital features of a good curriculum development procedure?

   explore features like:

   i - consultation

   ii - documentation

   iii - review processes

   iv - procedures for development

   v - methods of development (centralised vs decentralised etc.)

   vi - flexibility

5. What do you foresee as the roles of the industry training divisions currently being established in the curriculum development process:

6. Given the findings outlined in the Scott Report, how do you see the curriculum development process changing in NSW TAFE?

7. What alternative "model" of "models" of curriculum development would overcome the weaknesses outlined and contain the essential features of good curriculum development practice?

8. How long have curricula typically taken to develop from initial concept to completed document ready for implementation: What is the range? Which curricula have taken longest (and why)? Which curricula have taken the shortest time to develop: How could curriculum development processes be streamlined?

9. In the quickest and most efficient curriculum development scenarios you have described, what has contributed to the:

   i - speed of development?

   ii - efficiency of development?

iii - satisfaction with the final product?

10. Where have major human resources been committed in developing curricula at present? How could such resource input be reduced?

11. Where has there not been enough resource input during the curriculum development process?

12. What opinions to you have about:

    i - the extent to which the need and demand for a particular course has been tapped?

    ii - the responsiveness of the TAFE curriculum development processes to the needs of its clients?

    iii - the effectiveness of industry involvement?

    iv - the satisfaction industry has with the curricula developed?

    v - the extent of industry co-operation in the present and future development of curricula?

13. In what ways could procedures for involving industry in the curriculum development process be improved?